Notebook Series -- Notebooks by Experimenters Other Than Edison
Kinetophone and Kinetoscope Experiments -- A. M. Kennedy Books
Notebook, N-14-01-12

This notebook was used by Absalom M. Kennedy during January-August 1914 as a daily log of experimental work on the kinetophone. Included are descriptions of tests with recording horns and various recorders, as well as notes on film cement, synchronizers, shutters, and varied lighting. There are also entries regarding the arrangement of sets, building new scenery, and setting up a dark room. In addition, there are accounts of demonstrations for Charles and Mina Edison and other individuals, along with descriptions of meetings with other laboratory employees doing work on motion picture development. Several experiments in this book are described in more detail in N-14-01-01.3. Some entries are related to work documented in Notebooks by Edison and Other Experimenters—Recorder and Recording Experiments—A. M. Kennedy Books. The notes indicate that Kennedy received instructions, comments, and suggestions from Edison and that he was reporting to Miller Reese Hutchison. Harry W. Doyle, L. E. Hammond, Victor Hurter, D. McRae, Henry A. Taylor, and experimenters named Brodigan, Buchwald, Johnson, and Tuthill assisted Kennedy, while J. O. Lyman and George J. Werner were involved in similar recording work. The front cover is labeled "Daily Record of Work from Jan. 12, 1914. to Aug 5 - 1914." The pages are unnumbered. Approximately 100 pages have been used.

Jan 12, 1914.

Started D. McRae on Studio Outfits. Found parts & started him assembling Camera Drive.

Checked up films & records received for Road Show with Butler & checked his inspection.

Met Coyle & Nathan & locked Road Show with them. Took them to see McChesney & Saw Marquee & discussed new plans for Road Show. Marquee inclined to taking Picture Houses now.

Saw Hunter about motor starting device. No progress.

Saw Farrell & McChesney on new film cement tests. OK. Want Engineering Notice on it.

Inspected intercut Russian Film from Penhoet.

Had Butler & Singlar & film run & proved with record & memo to Farrell as OK.

Ran show for Chas Edison at night. Dictated memos & letters.

C.J.

1/13/14.

Truthie starts in on making Mr. E's German silver rolls & shoes.

McRae starts in on getting Cinchronizer ready for outfit.

Victor Hunter having hard time with motor starter.

Saw Langley on Electrical Apparatus returned to Electrical Dept. Brought out ① need of stocking on clips to hold Kinetophone hand telephone in Booth. Langley will attend to this. ② Westinghouse good design of induction motor starter. ③ need of other than cast iron grids for rheostats.

Worked on solvent cement for film. Mixture of 50% alcohol - 50% Acetone tried. Not always reliable. Did not make good joints unless used in excess.

Truthie starts on Mr. E's roll & shoe. Make German silver roll and chemically etched same.

Looked after inspection of film

Jan 14-1914.

Had Ritter finish up inspection of films and deliver to Shipping Dept.

Inspected Veitch Hearter model motor starter. Burn. Too complicated.

Ran show for Presbyterian Board Publication – Philadelphia, Pa.

Interviewed Gripper who turned up from Road Show.

Went to New York with Teuhie to inspect installation at #10-5th Ave for show next Monday.

Got report from Teuhie on needs for show Saturday Night next for Edison Club at Washington Hotel.

Discussed recording experiments with Taylor.

Jan 15-1914.

Tested out Mr. E's german silver roll and shoe. This has slight friction, Quality good. Volume not so loud as Rubber. Instructed Tut to grind shoe & roll to fit and to re-stitch both deeper.

Made up sample of film cement to match "Bull Dog" manufactured by the "One Drop Oil Co. Chicago Ill. This consists of.

2 gal	Denatured Alcohol	.45	.90
2 "	Acetone	.80	1.60
2 "	Benzole	.30	.60
			5 | 3.10
			62¢ gal.

If applied as "Bull Dog" cement, that is thick - generously to both surfaces to be cemented, it makes an excellent joint. Try cutting down or out the acetone.

Saw Mr. Unger, Operator who wants to become installer. Nothing learned from him.

Had Victor Hunter make up sample steel tape to align sprockets as per memo from Mr. Farrell. Finished up O.K.

Saw Mr. Durand with Langley & Lanahan about Mr. Lubrio suggested method of starting G.C. motor or planing machine. Legal Department does not want to give opinion until commercial model is made.

Checked up McRae on Studio Outfit. Camera received and mounting same started.

No films received for inspection Sent Hourmerain down to Recd Dept.

Farrell requests Tuthill & D. To be at Committee Meeting tonight to run film if Taylor did not show up.

Made test parts for Synchronizer on foreign letter.

Jan. 16, 1914.

Took steel strips for lineing up Kinetoscope sprockets to K' Dept. Met Hall. Rejects as not exact.

Received film & records from Stock Room.

Sent Ritter to New York to run show.

Sent Carter Hunter to check up South Orange High School job — Might telephone Carter to Orpheum.

Saw Higgins. Showed new Tyman Taking Motor for him. Showed this and American Taking Pictures to Lumigas.

Sent Gert to N.Y. to check up washings there.

Mr. Kuhn undertook Motor Starter job.

Note to MKH from Mr. Edison about men for European Studio Jobs.

Talked Kinetophone plans with McChesney.

Started Hunter on Kinetoscope Shutters.

Jan. 26.

Doyle turned up from Studio and said Higham sent him over. Saw H. who said let him go. Will see about letting Doyle go to Mr Cherney & putting Doyle on Studio Assembly as he knows more about it.

Sent Johnson to #10-5th Ave after pulls records and to Broad Studio after Okalus outfit. Latter wants changes on camera viz - tripod screw socket - pointer on lens & stop to come through the hood.

Jan. 27. - Put Doyle on Okalus Studio Outfit getting this ready for shipment.

He needs extra
1 A.C. Motor for sharpening machine
20 cells Edison Storage Battery
Rubber pads for amplifier.

Checked out.

Sent Johnson to Broad Studio for Austrian second set.

1/27/14

Raw show for Mr. Edison.
~~Inspected German Film~~

1/28/14. Finished checking Okalus Outfit. Checks OK except rubber tubing took blower to nozzle.
Checked out Werners Austrian Outfit #1 and sent to packing Dept.
Raw pictures for German representatives, New 90 to Studio with them to morrow.

1/29/14. Went to New York to show Messrs Anschul and Ludwig the Bronx Studio. Left 7:30. Arrived 9:30. They arrived 10:45. Saw Higham. Showed them a trial set up and made record of findings more. Very good. They complain however about treatment; that they want to see Mr. Nelson and Mr. Edison and talk over what they have to contend with. They complain also that the phonographs are not as loud there as here.

C15.3

Got back about 4 P.M.
Saw Hammond & showed him new pictures.
Went to Committee Meeting. Ran two talking pictures.

1/30/14. Took up looking after German Representatives with Milan.
Also show for Edison Club at Columbus Hall - Inspector laid out.
Took up Hammond's complaints of European Kinetophone material etc.

2/8/14. Went in N.Y. - Met Mrs. Neil Forbes, Mr. Miller & Miss Sullivan and went to Studio with them & showed them around. Higham took rehearsal of "The Ill Tempered Beast". Took record of Neil Forbes voice. Not very good. Enunciation clear but not enough power in it.
Met Messrs Anschul and Ludwig with the lady translator and her

husband at Hoboken and came on to Orange with them. Found Committee Room occupied so fixed up Lab demonstration room to show them the German pulpits. Afterwards went to Committee Room and ran over the whole list. They decided on the prints.

SG

2/17/14.

Tested out Edison Economy Transformer against Fort Wayne Compensare and found the former generally superior.

Started Steel Strip to line sprockets with aperture plate on Model D Kinetoscope

Work on Studio Outfits.

~~Started~~ Further on Magnetic Reproducer.

2/18/14.

Returned Fort Wayne Compensators.

Work on Studio Outfits.

Check up Magnetic Reproducer.

Taylor & Brodigan came in.
Arranged to run lacking pictures for them.

~~Started~~ Hammond on Flickerless Shutters.

~~Instruction~~ and Exhibition of Kinetophone Subjects to Taylor and Brodigan.

2/19/14.

Saw to having Taylor & Brodegan instructed on Synchronizing.

Tested Gundlach against B. & L. lens for Kinetoscope.

Inspected films patched by Reiter.

Selected films for Committee Room.

Sent Hammond to see about Edison Club Show tonight

Drew new diagram for Portable Photostat.

Inspected new films of A Mutual Misunderstanding and out for Andrew Carnegie.

Committee night. Ran new films.

2/20/14

Testing out change on portable Rheostat for Road Shows.

Run our film "10 days with the Atlantic fleet".

Digest of reports of Bronx Studio Voice tests by Mr Edison and select best voices & report to H.

Prepare for show at 2:30 for McChesney.

Send Hammond to #10-5th Ave.

Send Max blank cans to Leeming to test.

Further on magnetic reproduction

Went to Bronx Studio to see take of picture.

8/21/14.

Arranged for show in Committee Room

Ran "10 days with-flat" for McCleaver

Ran new films "Zauberflöte" and Hoffmann's Erzählungen for Mac Hetz.

Checked up Clues on Gauge.

Checked up Doyle on Studio Outfit.

~~Started~~ Hammond on film cement & heaters.

Made up record of actors from Mr Edisons tests.

2/24/13.

Sent Hammond & Johnson with Ford Car with apparatus for Union Leaguer Club Show.

Finished up Combined D.C. and A.C. Rheostat for Road Shows.

Finished up strip for aligning sprockets with aperture plate on Kinetoscope

Ran Hoffmans Erzanlungen, Samson & Dalilah, Zauberflöte A & B; Co to Jest Kinetophon Varsona in Comm. Room 2nd for Hayes, Bing etc.

Finished up bottles for cement and new film cement.

Ran domestic film for Humphreys.

8/25/.L.

Hammond completed can seal.

Reports in Rhiostat, Film Cement and bottles to McRitt for further tests.

Bill Humphreys criticizing taking pictures.

Records for Humphreys up stairs.

Ran new Human Kinetics stuff for McCheaney.

Committee meeting on film inspection

2/26/14.

Tried out all new Ozeena subjects selected best for Committee and determined cuts.

Ran our Bragg Studio prints with Humphery.

Show Union League for MRS & got Hammond and Doyle off.

Got machine ready for Committee Meeting.

Attended Committee Meeting

Phoned Hegham to come over to Committee Meeting.

2/27/14.

Raw Bronx Studio subjects for Humphery.

Got Bertrice & Cloer to check up material for Cleveland

Got Ritter to ~~#~~ 10-5th Ave and Cloer to take out Union League installation.

Inspector J. Gumay lectures for Foreign Shipments.

Furnished Humphery information on directing - records of voices, stage setting etc.

2/28/14.

Got Trixie and Clyde off for Cleveland.

Looked after inspection of films & records.

Ran pictures for Humphery & helped him out.

Went to Century Vocal House & saw Orville Harold and in Secret of Suzanne and I Pagliacci. Fine - Took down the house.

3/1/14.

Went to MSA. Met Mr. Cornson and Miss Humphery of Huntsville.

Got Taylor to come to lab to make records of Miss A

Ran taking pictures for them.

Took reproduced records of Miss A.

3/8/14

Experimental Recording Tried 3'6" against 8'6" horns. Found no difference

Inspected films & Records. Found Jno. McGraw on a film & Beard.

Had amplifying recording and reproducing machines worked on.

Raw German subjects for Gall.

Found heretofore:
That above 20', reproductions better with recording machine on the floor in place of at standard height. If the voice is apparently aimed at floor about half way to recorder, results are best.

That reproduction is better with less tendency to blast is less if the person recording balances on balls of feet in place of standing with heels on floor

3/11/14.
Spent most of day experimental recording. Got Reproducing machine in shape.
Tried aluminum lever arm in amplifier in place of glue. Got better quality.
Taylor tried putting dope on reproducing machine to stop rattle. Got oil on amber roll & put out of commission.

8/12/11

#5 Recorder Tests
Mica .0046
2 Gaskets
Wax Sealing
Wax & Diaphragm
.038 Sapphire

A Recorder
Mica .0035 x 1.000
2 gaskets
Wax to gaskets
Shellac & Diaphragm
~~Recorder Head Standard 1 3/8"~~

Tests of these show ~~that~~ #5 recorder holds down blasts very well but is weak

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"A" recorder, blasts easily, is good and loud. Reproduces piano well -

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Recorder #62 (Taylor)
.0045 - 2 gaskets
Recorder #63 (Taylor)
.0045 - 1 gasket.

3/12/14.

Recorder #62 first test very full. Should be good with thin voice

Record #7 - .007 - otherwise standard. This recorder is very weak. Should not be used

Recorders #3 - 62 - 63 - tested with phonograph record of Hoffmann's Erzählungen. 3 appeared generally best. 62 good on high but rotten on low notes - 63 more even but not so good as #3 -

Records of Miss Dunwoodie
#1 - Recorders #'s -
#2 - " #5 -
"All at 10"
"Last Rose of Summer"
Even Tone.

Miss Dunwoodie prefers #62 Recorder
AMK prefers #3 Recorder.

8/13/14 - Friday.

Test of #1

Amplified same master regular and with aluminum arm, rubber to weight and deviation of mandrel motion reversed.

Apparently the first named had more quality but less volume. The second had more volume but less quality.

Mr. Pierman preferred the latter or standard.

Test # 2

Test of Recorders #'s 3-1-A.

#3 - Standard size .0025' mica

#1 = " " .0046 "

A = 1" diameter .00275 "

A is most sensitive but shows a tendency to blast

#3 is fair open tone but Gael says back in horn

#1 seems to be the most satisfactory.

Test of Recorders #'s 3-1 & M.X.

3 & 1 as before. & M.X. is good.

Show at Plainfield.

C513

3/14/16

Listen to tests of recorders.
Found out about Dope.
Make up recorders.
Tests with Mr Humphries on master record.
Go to Brown Studio to run pictures for actors and take Bradtigamo camera to Higham.

3/16/13. Monday.

Test out Shutters for Gate.
Look after inspection in Committee Room.
Look over Opera Libretos.
Go over film layout with Humphries.
Get Storage Batteries Charged.
Ampelgin passed to have master on Tok and get rid of chips.

Test new rubber head diaphragm of Taylors. Holds beats fine but not sensitive enough.

Test recorders #'s 7 & 9 of Dayle.
#7 promising - sensitive. #9 No.

Test #9 - #1 & New Rubber Recorder made ours.
#9 good
#1 Standard
* Rubber very promising. Seems to throw tone but better than others.

Found metallic patter in record in this test hangar and traced it to recording horn.

3/17/14

Trials of new recorders.

Made up new recorder with aluminum window as suggested by Mr. Furman – Apparently much more sensative than regular Romang. Will carry on further.

Test of same recorder
1st with rubber window
2nd " " with cell
3" " cell only
4th " metal window

#2 apparently best but only slight. The difference seems to be that while the rubber window adds slightly to the sensativeness of the recorder it robs from the quality of the tones.

Further listening to records at night seems to show that the rubber reflector or window while apparently

making the recorder more sensative does so by adding a rattle or tone to the regular at the expense of quality of the regular recorders or at the expense of pulling out overtones. Taylor slightly quiet MRH

Night

Letters to Gusselaar & Hengman.

Listened to Records & cleaned up catalogue

Made piano records with various recorders.

3/18/14.

Outlined to Doyle work on Amplifiers.

Saw Reinhold on photography etc of last batch of Cecina Studio subjects. Suggests Camera men come out here & see developing operation for final instruction in depth of developing & appearance of good negative. Suggests making standard prints for men to compare with.

Wrote Report to McKean on last lot of subjects.

Experiment with Humphries on long horn to concentrate sound. Also his suggestion of side and overhead reflectors to help concentrate sound.

Got for Foreign Department Lens and Aluminum Drum Wheel for St. Petersburg Studio.

[illegible]

Night

Test Recordings, Dayle's Voice & Piano

#1
#8
#10
#11
#7
#'s 8 and 11 apparently the best

Test Recordings, Dayle at 8 ft - Kennedy at 2 ft

X #7 poor
#8 good - sensative & full
#10 good but sharp - "
X #11 fair -
#1 good - holds down -

Test Recordings - Dayle at 8 & 10 ft - Whistle & Piano

#1 good on voice - fair piano
#8 good - more sensative than 1 better on piano not so good on whistle
#3 good - throughout
#10 good - whistling best

Test Readers

Daryle Speaking & whistling

	Tact	Rhythm	Piano	Sensitive
#10	70	80	80	sensitive
#1	80	80	70	hoddence
#5	75	85	90	fairly sensitive
#8	80	80	80	" "

8/19/14.

Test of Aluminum arm on amplifier. Dayle Singing Record & piano
1 - Regular arm @ 96 R.P.M.
2 - Alum. Arm at @ 96 R.P.M.
3 - " " at 120 R.P.M.

Dayle and Kennedy agreed that the aluminum arm gave less volume but more natural tone. That 120 R.P.M. is a little louder than at 96 R.P.M. and is more pleasant.
Pierman decided that #1 was the best of the three.

Another test of same on Miss Humphreys song —

1 - Regular arm @ 96 R.P.M.
2 - Aluminum " @ 96 R.P.M
3 - " " @ 120 R.P.M.
3 was best - 2 second - 1 third.
3 and 2 much more natural than 1.
Can not agree with Pierman -
Gail agrees that #3 is best in each case.

(1.9)

Doyle made up rubber tube recorder with tubing furnished by Perman. Casual tests show this to be an excellent recorder, sensative yet does not bleed.

Night.

Committee Meeting. Pictures show up very well. More plucky than usual.

Ran Tales of Hoffman for Road Show with Trickle.

Tested out Rubber Diaphragm against #1 Recorder. Rubber apparently the better.

Cleaned out old used blanks.

Recorder #11
Mica 0055S (straight) – standard –

Recorder #12
Mica .0028F (Concave) – Standard.

Recorder # 7
Mica 0041F (Straight) – Standard –

Recorder #13
Mica 00565 (Straight) · Stylus slightly bent towards work

Recorder #1
Mica 0045M (straight) Stylus projects short from arm

4/8/14. Test of #11 Miss Dunwoodie - Good
" " #11 amK - good
" " #7 amK - good little fuller than #11
" " #14 amK - good and full (Destroyed)
" " #0 amK - good - not quite so full
" " #4 amK - good - very full (best)
" " #

4/10/14 Test Bushwacks - Miss D - Good - repressed
" " #4 - " - Good - very full -
" " #2 - " - Very good - full -
" " #12 - " - Good - full -
" " #0 - " - Good - not so full -
" " #11 - " - Good - " " "
" " #12 - " - Good very good little sharper than others
" " #15 Doyle " N.G. Loose
Night " " #2 - ~~Disproved~~ ~~Sunk~~ sounds a little tubby
" " " #12 " " Good, not quite so full as #4 but true in tone
" " " #13 Good - Not quite so full as 12 but true -

May 1 - 1914.

Finished up 6 recorders for German group.

Tested out recorders by Miss Dunwoody.

Go to Carnegie Hall for Ellery's Band.

Of this

"Artha Williston - Sopriano was good. Fine enunciation voice fairly good. Little throaty on weaker notes. Accompanyist mechanical.

Alfred Lanlerti 'cello was rotten - squeaked once or twice and his instrument was very metallic and rattley. His accompanyist was mechanical.

Clarence de Daux-Roger, violinist. Fair. Accompanyist excellent. Soft touch and with expression.

#5 Buchwald - Showed excellent

#

May 7.

Experiments on Recorders.

Buschwacks #1 against #10 Standard

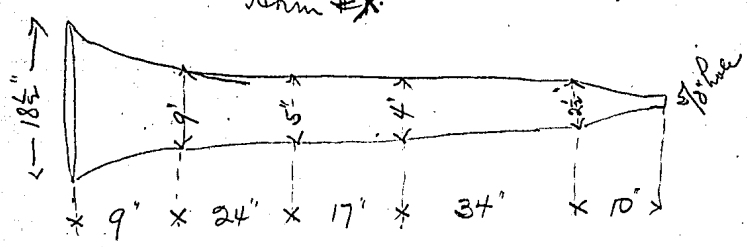
This recorder showed up little thin and

voice he changed.

Experiment on horn:

Compared experimental horn #1 with standard horn. Using same recorder, distance, voice and all other conditions same, horn #X was much thinner than the standard.

Horn #X.



May 3.

Got our new long horns from Werner to try out.

Sent Dayle to New York for information on Stage Props, painters, scenery, etc. Obtained

Electric Effects
Kluge Bros - 240 W 50th St.

Paints
Ludwig Therme - 288 Bowery

Stencils
Stevens Co - 29th St x 6th Ave

Costumes (
Horace Miller - 263 S. 11th St - Philadelphia

Costumes (not military)
Tams - 1600 Broadway.

Hardware (Stage
A. W. Gerstner - 42nd St x 6th Ave.
Manhattan Co - 34th St x 3rd Ave.

Artificial Flowers etc.
General Flower x Decorating Co
228 W 49th St.

Dave Thomas Chalmers and took up matter of getting some of Century Opera Company Talking Pictures.

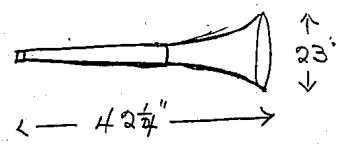
Lyman tested out camera for focus etc.
Got up Camera and Reader in position
Fixed out Arc Lamps
Made trial take of pictures.

May 5th

Tried out recorders on very soft talk or representatives of Bell Telephone Co.

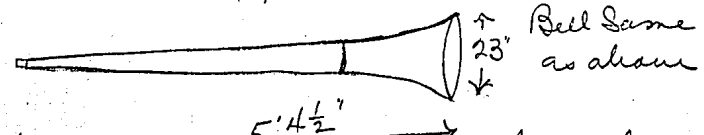
Tested out Special Horns as follows. Used Humphry at 6 ft.

Horn #1 Regular



Used Recorder (Numero) #10 on all tests Horn #1 as standard.

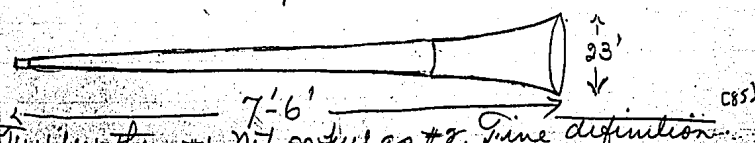
Horn #2 Special



Bell Same as above

This horn proved much fuller than #1

Horn #3 Special.



Fuller than #1. Not so full as #2. Fine definition.

C85)

5/5/14.

Tests of camera for exposure inside with regular arc lamps.

#1 @ f 4.5
#2 @ f 6.3
#3 @ f 9
#4 @ f 12

#1 gave apparently the best exposure.

Test for experience on running camera and simultaneous reading.

(1) Mr. Humphreys.
(2) Miss Dunwoodie (take up failed)
(3) Miss Dunwoodie
(4) Mr. Humphreys.

Buchwald made up
#15 Recorder. Tested little fuller than standard
#9 " " " thinner " "
#3 " not tested.

Night. Came back with German and made the following tests:

5/5/14.

Tests of camera for exposure inside with regular arc lamps.

#1 @ f 4.5
#2 @ f 6.3
#3 @ f 9
#4 @ f 12

#1 Gave apparently the best exposure.

Test for experience in running camera and simultaneous reading.

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(3) Miss Dunwoodie
(4) Mr. Humphreys.

Buchwald made up
#15 Recorder. Tested little fuller than standard
#9 " " " thinner " "
#3 " not tested.

Night. Came back with Lyman and made the following tests:

6/5/14.

Test #1. Regular Lighting for lighting top, bottom and side. At 16-18-20-22-24-26-28-30-32-34-36 ft.
Diaphragm f6.3.
34 Lamps burning.

Test #2 Same as above except
Diaphragm f9.

Test #3 Lights were tilted so as to increase side lighting. Object marked around on stage
Diaphragm f9
34 Lamps burning

Test #4 Duplicates #3 by mistake

Test #5 Same as #3 except alternate end & next to end lamps out
Diaphragm f 6.3.
30 Lamps burning

Test #6 Same as 5 except
Diaphragm f9.

These tests discarded with positive developer.

5/6/14.

Cleaned up ready & took pictures.

Fixed up small phonograph for recording.

Made tests with Miss Dunwoodie of masters for album

Committee meeting to act on film.

Examining results of last night

Took up matter of getting Wainright and some of stock Company in to see taking Pictures.

Test of Pierman's amplifier arm.

Buchwald - Assist Werner in putting up machine. Repairing synchronizer.

Tested #5 Recorder. Good by feel like #15

5/7/14.

Test of #7 against regular wax

① Test of 3 recorders, #'s 10-12-15 on each, Humphries speaking and low notes on piano. Dubs #'s 1 being sent for Blue Amberol Records from. Dubs #2 being used to compare with dubs #1 to compare quality of wax with celluloid.

② Recording, Humphries - on each and dubbed on regular wax. Results. The reproduction from the regular wax is fuller more resonant and better - The #7 wax is apparently harder and tends to blast.

Results not however conclusive. It may be that #7 wax will be better ~~when~~ heater under the arc lamps.

Of the recorder tests
#10 - Standard
#12 - Very full
#15 - Fuller & more explosive than

5/7/14

#10. Try this with blue reads to see if they are sharper.

Made up positive from yesterday's negatives. Exposure & lighting seems to be good.

Commencee of Operation
Telmo. Next Quiz 22 –

5/8/14
Pictures to determine focus of lens and lighting

Voice Tests of Mr. Wainright and Miss Kennedy.

Showed pictures to above.

" " " Martin Miller.

Went to DeKalb Theatre Brooklyn to see about installation.

Saw Webb pictures at Fenton and Harry Landau pictures at Palace theatres. The Webb exhibition so much better managed than ours.

Work on Trunnions.

Lyman made tests to determine flat line & focus.

5/9/16

Committee meeting of new films.

Got office finishing up dark room.

Bushwald made recorders #7 shade thinner than #15 #19 — N.G. Took down.

Lyman made tests of regular lens against lens in Dr. Higham's Camera.

5/14/14.

Laid out DeKalb Theatre equipment.

Tests of Pierman's Amplifier arm by Meyer. It is better and more quality than regular arm at 100 R.P.M. At 150 R.P.M. the loudness is increased slightly but is still not as loud as regular arm

Ran operas for French representative. He agrees with us on grading.

Started Tuthill on equipping Kinetophone outfit in studio.

Buchwald put new governor in #6 machine & fixed same in working condition. Also cleaned up gears in #6 amplifier.

C.W.J.

5/12/14.

Had Campo changed further back, extension pipe made for this.

Straightened out storage batteries on recording machine.
Changed lights 9 ft back
Got in new floor cloth, grassmats stage brackets etc.

Made tests on Permano Amplifier Arm - Sound better quality and less volume with it.

Met Manager from DeKalb Theatre. Show them pictures.

Committee Meeting for Hungarian Subjects.

Bashwald on changing batteries for Camera.
Working on #7 amplifier.
Weight Hooks for Recording Machine.

Night - Hammond Mark Ryman & Menta back
3 tests quick changed lights for exposure. Exposures showed static.

May 13/1914.

Tested out two Freeman head recorders for Mr. Pierman.

① Sharp and metallic. Not as full as standard. Surface little less than standard.

② Less sharp & metallic - better than former but still not as well rounded out and full as standard. Surface practically same as standard before and after amplification.

With Committee - finished Hungarian Subjects except #186 of which the record was bad.

Lyman made a tests with lights. Lighting seemed ~~sufficient at~~ f 6.3.

Tested voices of Mr. Palace N.Y. and Manor - who can be used for character parts.

Furnished up "Trapped". Not long enough for 9 and too long for 1 record. Need pencils.

Backward:

New needle on amplifying machine.

Changed record holder spring arm on reproducing machine.

Made #19 Recorder. Not tested.

Lined out new Reflectors.

May 14/14.

Saw Mr. Porter about Nitrogen lamps and reflectors. He sure said sockets and reflectors.

Worked on scenery with Powell.

Lyman set up x-ray pictures to try lighting and focus. Good results.

Checked up DeKalb Theatre. Seems to be in good shape

Committee meeting at night.

Buchwald:
Set new needle in #7 amplifier arm.
Made new needle arm for #6 machine.

Tested out Pierman's new amplifier arm. Better quality and less loud than regular.

May 15 - 1914.

New reflectors on and try aluminum.

Test of Pierman type amplifier lower arm. Good results.

Committee meeting for fifth Russian Installment

Made test run of lecture
① Humphrey - Lecture
② Miss D. "Last Rose of Summer"
③ Dayle - Song
④ K - Chimes.

1st run. - take off of camera slipped on 150 ft. Nemo's #10 recorder. Too fast. Blast.

2d run. Nemo's #10 Recorder. Stiff sound & little blasty.

Night Pasted out Kinetophone Reproducing mechanism.

Ran Operas & H. Film - Phonograph patents. Pulleys bad.

Lyman submitted test of film - fine.

5/16/14

Committee on #186 A.

Finished up Dark Room & got in paraphenalia.

Got in Mirrors.

Negatives of yesterdays takes.
Bushwald.

Repair Tripod.

Amplify Tracker Blanks.

5/18/14.

Committee meeting on Sixth Russian Installment of Pictures.

Starlin Powell on new set of Scenery - Panelled library & parlor set.

Made take of impromised lecture Complete no apparent hitch.

Buchwald reports
General work on Scenery,
Amplifying.
Testing Record #19. Result same as 15 which is a shade fuller than #10.

Tested Blue Amberol against Wax records. Blue amberol is a little sharper. Found also that a record which is full & tubby in the amplifying room is only good in the large room.

Tests of Metol-Hydroquinone against Rodinal developers. The M-H is apparently much better.

5/19/14

Set ready for Lecture telephone
~~Talent~~ = play etc.

Lay out Arch for new scenery.

Hahnes man & arrange for
props.

Committee meeting on
7th Russian Installment.

Treed Lighting takes with slide
and old moving picture
camera.

Brookwald:
Made Reader #13 shade thinner than 15
" " #17 " " " 15.
Experimenting on light amplifier
arm.
Made new amplifier arm.

C143

5/20/14.

Scenery for the Lecture.

Record of Geo. N. Head Jr.

Set up & tried out complete Kinetophone apparatus. Phonograph shows up weak for this place.

Buchwald:

Experimenting on Amplifying Mach #6
Recording with mirrors Recorder
Made Recorder #6
Synchronizer on Projecting Machine
put in working order.

5/21/14.

Experimental work on aluminum amplifier arm - Good quality but deficient in volume.

Lay out method of continuous pen-ding.

Recorded & took pictures of Mr. Head - Heavy Bass voice.

Ran reel & record of second lecture. In and out focus due to printing press. Has flickering light which must be removed.

Prepared for Commercial Pictures.

Ran taking pictures for MPA

Brohwald: worked on new aluminum amplifier lever arm.

5/28/14.

Experimental takes of lighting

Get second camera ready for outside silent pictures.

Got wall paper for scenery use in place of paint as usual.
① More decorative on account of pattern.
② Quicker to set up.
③ Softer effects.

Hutchison over. Showed blue vard compared with wax and #7 wax against standard. Requested 24 additional blanks for test.

Took pictures of Maxwell & Mackesey.

Went to DeKalb Theatre at night.

Bushwood Experimenting on amplifier arm - new fusion piece in gammer of reproducer.
Amplifying tested blanks

5/23/1.

Tests for Lighting

Saw Bob Lest about work.

Got painter over to New York to see White on scene painting.

Saw Reubert on new foreign projects from Austria.

Bushwald: Testing & changing batteries

5/25/12

Change lights & test new lighting.

Horn trial against Horn.

Sent Pauncefort to Famous Players Studio New York. Came back in afternoon. Rep Shinn on present act.

Made tests of Geo. Head & Jane of Nelson, Gaylord & Barnet of the Edison Quartette.

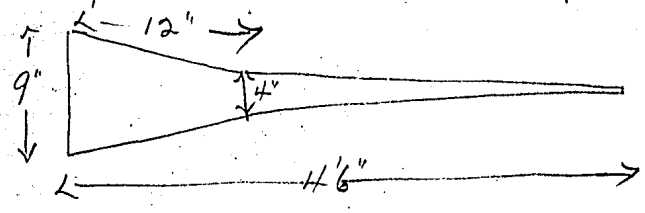
Required furniture from Hahne's. Set up to determine stage room needed.

Buchwald:
Experimenting on Amplifying Machine #6, new needle arm.
Helping Bernie put up Studio outfit.

Night: Projected picture of Hutchison singing bear song.

5/26/14.

Experiment on 2 horns by Werner.



#11 horn was made of zinc
#10 " " " tin
Both were weaker and thinner than regular horn as used.

Remainder of material procured from Yahnke & put in position.

Visit from Mr. Jacobi concerning propellers. He claims –
① That the matter of props in the larger studios is carelessly run and that the regular property men are getting money out of it.
② That not enough attention is given to the props.
③ That studios should have a large number of fixed props

as possible and rent only their special stuff.

Made test of Geo. M. Head Jr.

Made take of Gonzalez sketch
① Geo. M. Head Jr. - Yankee song.
② Miss Dunnebaby - Last Rose
③ Bob Lett - Crosby on "Oh Bonnie Me".

Made take of MRH close up in chair.

Bushwood Repaired the reproducing machine.
Experimenting on amplifying arm of #6.

5/27/14.

Experimenting with diffused lighting from white reflecting surfaces. Used Photo Engravers lamps on large screen.

Experimenting with arrangement of sets to get best results.

Experimenting arrangement of camera and phonograph for taking close on objects.

Made take of Hutchison close up.

Bushwald:
Repairing Motor on Reproducer #7
" belts on regular reproducer.
" Retorts.
Assisting Werner.

5/28/14.

Renbord brought up titles to be made.

Looked over scenarios that Humphrey left with Lee & selected four that may be used.

Ran takes of features made.

Experimented with recorder of Mr. Higham's.

Tried out new reflector & ordered 18 for two back rows.

Made reflecting screens for lighting.

Loaned Jim White 400 ft film.

Buchwald:
Repairing Recording Machine #7.
Assisting Werner.

June 1, 1914.

Received orders to make Portuguese Lecture & Portuguese Faust.

Laid out outline of Lecture. Got in touch with Humphrey for talent.

Got scenery & props ready for Lecture.

Showed Powell, Werner & Lynan, English Faust for comparison. Laid out scenery etc for Portuguese Faust and ordered material.

Had English Faust written up for translation into Portuguese.

Got after special recorder lenses for Higham.

Test of alternating current light for McSweeney.

Buchwald:
Synchronizing Pulley on #6,
New amplifier needle in #7.
Repairing recording mach #6.

June 8, 1914.

Saw Humphrey about putting on Portuguese pieces. Wanted 10$ per day.

Made pattern about Portuguese talent. Got in touch with McE.K. on same.

Ran picture of McE.K. Pretty good.

Got new reflectors. These seem to give a great deal more front, short in light and are good and soft.

Got English of Faust for translation.

Experiments on new amplifier arm. This is now better than the standard. It gives a crisper, fuller record.

Buchwald Work on Amplifier #6
Easing gears on synchronizer
Testing slop recording.

June 3-1914.

Work on Scenery for Faust

Record of Mr. Mc Cole, 66 Congress St Newark, N. J. - Slang, tramp & burglar parts. This man has fair appearance and articulation. Voice not heavy and load enough to fill theatre.

Method of Marguerite and Cross visions in Faust worked out.

Another call by Mr. Jacoli. He made some new points among one a good one or so.

① In taking pictures take some natural effects if possible.

② That the long, uninteresting feature film is bound to go and the short skitchy films will be the permanent ones.

Bushwood:
Made messges for amplifying machines #'s 6 and 7.

[145]

In recording and amplifying - practice
Stop recording machine for ~~[illegible]~~
records as change of frequency &c.
Made recorder which has not
yet been tested.

June 4, 1914.

Tests of lighting on portrait taking picture I saw made. Need cooling coil so we can project these here!

Getting Scenery ready for Faust. Frame work of arch, cross background and a background panel finished.

M.R.K. Mr. Maxwell & visitors saw. Made phonograph records of them.

Got finished copy of Faust Scenario. Take to Lamborn to take to Polyglot Co for translation.

Practicing slop recording.

Projected new picture taken. Lighting is better but still harsh & predominates on top.

Bushwald Tracing Cloth Thread Locators
Cleaning & oiling recording machine
Assist Werner in recording and amplifying.

Finished at Russell & Andrew Studio

6/5/14.

Hammond to New York after talent.

Experiments on lighting for portrait talking pictures, using nitrogen lamps for lower and front lighting.

Made take of Bob. Lett in Talking Portrait.

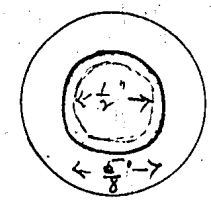
Had Bleak piano tuned.

Made test of G.M. Head Jr.

Buchwald:
Inspect & clean projection #6
Loose connection between diaphragm and shoe.
Assist Werner.

6/17/14

Experiments on new diaphragms for recording



#30

Main mica diaphragm standard diameter .005"

Our this second diaphragm .006 thick - 1" diameter.

Both cut through with 1/2" diameter hole. Piece of aluminum 5/8" diameter .0075" thick stuck over with solution of Canada balsam in benzol.

Gives tone just as loud & more human quality, fuller & not liable to blast as compared with #10.

#5 Another made similar but with 5/8" hole & 7/8" aluminum. Similar results.

July 7 - 1914.

Work out with Werner on preamplification. By careful putting of the stylus to avoid surface as far as possible this can be done.

Dubbed - amplified masters of the fine Vienna subjects which were weak and made them much louder - loud enough to be commercial.

Dubbed "Mrs Murphys Horseshoe" which before was weak.

Tested out "Panchrome" portable arc light from Allison & Hadaway, 235 - 5th Ave. New York City.

This is a very light, compact, portable form of arc light. Is rather fragile and delicate. Its actinic power, on test was slightly less than that of an Aristo arc and much less than that of an Engraver's arc. The light is well distributed however and on account of the lightness and portability of this lamp I think it will prove useful.

[155]

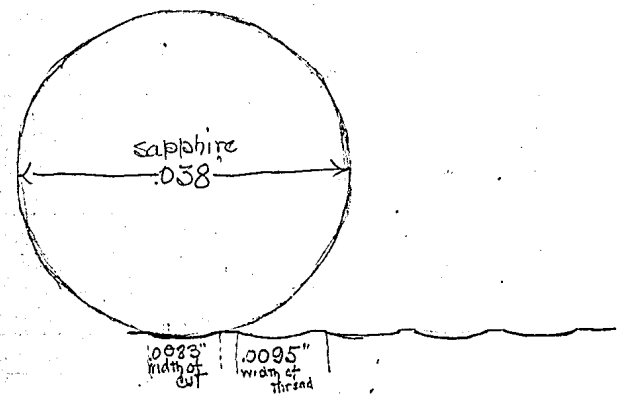
Tested #236 a & B "Xylophon Solo Jan Joseph Belogk" from Berlin. These records are good and loud. The recording and surface are both good.

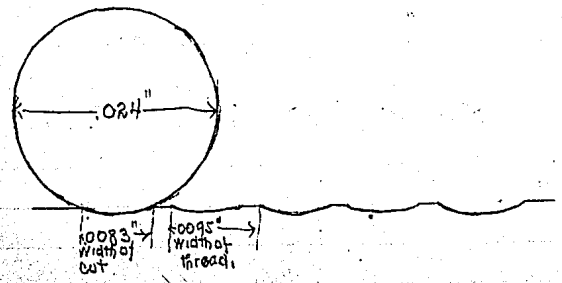
Tested 16" telephoto lens on regular motion picture camera. Difficult to adjust as this lens requires about 10" focal length for good work. Lyman also made curious discovery that it was impossible to focus this with regular focusing microscope. Don't see why. Must use this lens back on stairs to get good picture.

Lyman fitted 75 mm. lens from Gyroscope Camera on regular camera for portrait work.

July 23 - 1914.

Experimenting with recording with .024" stylus. This has several advantages
① In deep recording of heavy notes it does not trespass so much —





cut shows this.

② That for preamplification (using .024 sapphire x .021 diamond) as at present only one amplifying machine is required in place of 2 as at present.

After several trials, Werner made a record apparently as good in quality as standard with .038" sapphire.

Records made Bob Lett singing, Ann K. at piano.

Lyman made pictures from Studio window with 5×7 camera set up on same object camera moved 5/2". The 5×7 prints were cut to 3/4×3/4". When mounted side by side it was practically impossible to make them appear stereoscopic to the unaided eye. When cut & mounted about 1 5/8" apart they appeared stereoscopic to the unaided eye after gazing at them.

(1.6.)

for a time.

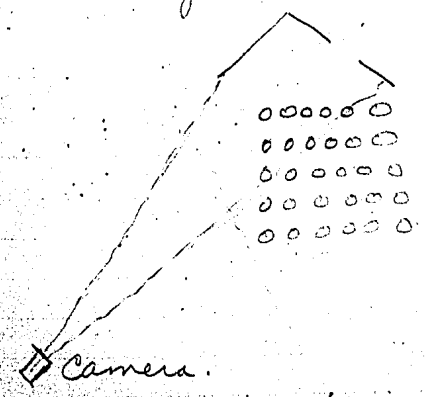
July 21.

Nimer made new records with .021" sapphire. The quality is excellent, surpassing anything I have yet heard on the Kinetophone.

A comparison of these with "College Days" made the latter sound weak and phonographic.

Lyman made other stereo negative plates with camera 26" apart. Did not print.

Lyman arrainged new set up with lights on side –



made exposures. These planned to show that wide open lens was necessary. Tests showed poor focus but good soft lighting.

Planned with Lyman & Powell scenery for "Tales of Hoffman" act ordered material & made diagram of scene to scale to get perspective.

July 25-1911.

Lyman made further tests with side lighting screen.

Nernst built up new readers and mounted papphino on new reading arms.

Aug. 1. - afternoon worked on theory of stereoscopic photography & mounted photographs.
Proved that the photo's taken 26" apart would not work stereoscopically

July 27, 1914.

George Nerney made new personal heads and further lot of .024" recorders. Got some exciting results - more natural than formerly.

Ran picture taken with lights arranged as shown 7/24/14. Results not good. Focus bad and lighting was hard and contrasty in place of soft as looked for.

Lyman sick in afternoon. Tore down arrangement as above and rearranged lights to same as in Portuguese picture.

Got after new reflectors but did not get them.

July 28, 1911.
Set up & ready for Miss Spencer & Miss Clark invited over.

Showed Edwards to Kom. Read. Made trials of Miss Spencer's voice. On account of [illegible] & Ringer didn't appear [illegible] take picture

New reflectors came out on. Made trial take with them #3 @ f6.3 - #4 @ f9. - #4 @ f11. Sent to Rudisel to test & report correct exposure.

Made up film, focusing screens for camera. Lighting all not like because they bubbled.

Charles Martin sent over by Farrell. Designed kinetoscope for Sloan & Chase Saw Luby about. Can't not employ.

7/27/14

George Perner made up new reflectors and tested out with Abb. Kat. [illegible] on "Come Back to Erin". Excellent reproduction.

① Lyman made tests from Chemicals negatives. Set up camera for test of new reflectors.

② Set up at angle as shown 7/28/14 & made test take, new reflectors.

③ Set up straight as ① but with 5 Photoengravers arcs on side and made test take & sent to Penhood to develop & print.

Porter from G.E. Co came with Holophane & enamelled metal reflectors to test. Made still pictures with 1000 watt - 50 volt 1/2 watt per c.p. nitrogen filled tungsten lamps in following order.

(1)	Halophane #1500 Reflector	500 watt
(2)	D-Olier Reflector	" "
(3)	No reflector	" "
(4)	" "	525 "
(5)	" "	55 "
(6)	" "	57½ "
(7)	" "	60 "
(8)	" "	62½ "
(9)	" "	65 "
(10)	Arcto Arc Lamp	
(11)	No reflector	67½ "
(12)	" "	70 "

Werner made up & tested out 3 new recorders. Bob Pang came back to Erin which went fine.

These recorders now have about as little surface as possible amplified only once in regular ways

7/30/14.

Lyman developed 12 plates made by Porter of test of tungsten lamps

Of these #'s 1 and 10 appear nearly the same density so that results with the Holophane reflector are encouraging. These lamps are however limited to burn vertically only so that to be useful they can be used only for overhead lights. What is needed for this work is a lamp which can be easily arranged to put light into the scene from the front.

Had mirrors for stereo experiment framed in Mr Muddo shop.

Saw test of film made with all new style reflectors on Arcto lamps. Shows improvement in diffusion over old style lamps.

Experimental pictures on brass aperture plate with steel pack shows that no static has been experienced since using this and no pictures have appeared out of focus.

In case of #1 Camera with steel runners as usual, no trouble from static has been experienced but emulsion sticks to steel slides if the least rough.

Perrin made up recorders as follows:

#30 - Sapphire .024" diam × .075" lap.
Mica .004" × 1 5/16" built up center of Jap. Paper disc .005" × 5/8"
2 gaskets - mounted wax, rosin

#70 - Sapphire .024" × .075"
Main diaphragm mica .005" × 1 5/8"
Secondary " - under-of " .005" × 5/8
2 gaskets mounted with wax and rosin.

On trial both compared quite with #10 Standard.

(over)

Am went to New York in afternoon to see Galbraith - Welch about scenarios from Rupert Hughes & others. Asked them to get price from him and from Dickson Harris on scenario for the Collins & Carlan sketch.

July 21, 1914.

Made test to show difference in color value of make ups using Light yellow (Powell) Medium yellow (Bushwald) Dark yellow (Kennedy) Flesh (Pitt), Negro-light (Doyle). In this Benzler played piano and Robb Pitt sang "Come back to Erin". Benzler, Bushwald & Conan had on no make up.

Picture (test) showed up well - clear & distinct yet not harsh. Scenery showed up good. No apparent difference in color value of make ups on Powell, Bushwald Pitt & Kennedy could be seen.

George Werner made tests to determine if .038" or .034" records were better. First trial seemed to show that the .034" caused "blubber" on high notes. Subsequent trials using the best of .038" and best of .034" records, 3 of each seemed to show that

The latter gave better quality.
Lyman made alum test and
cleaned cameras.

8/1/14 (Saturday).

Bob Lex did not come. Werner made no tests but built up new recorder.

Werner made 18 prints from still picture of "Test of Makeups". More difference on still than on moving picture.

8/3/14.

Werner has determined that comparing records with .038" & .024" sapphires, both at 100 R.P.M., that the .024" was fuller & more natural. Making the same records at 100 R.P.M. made the one taken with .038" sapphire sharper but did not change the .024" so much if at all.

Werner made records with #20 Recorder (.024" sapphire at 60-80-100-120-140 & 160 R.P.M. - amplifier them at 80 R.P.M. & reproduced. Both Rest singing with piano accompanyment made. The singing at 60-80 & 100 R.P.M. a little sharp and metallic. Rest good. The piano seemed good on all except 80 R.P.M. which seemed little full & having too much resonance.

Lyman made exposure of reflecting mirrors for Stereoscopic Photography Experiments. Plate taken at f 2.7 - 1/50th sec showed lack of depth &

(191)

sharpness. (Due to thin mirror mounted in frame probably becoming warped & was imperfect surface to begin with.
Lyman worked with Essner mounting lenses in camera. Will get Dallmeyer f1.9 lens tomorrow.
Got ready to take Miss Elizabeth Spencer tomorrow.

Received model of starting device for a/c asynchronous motor for shaving machines from Mr. Simpson.

8/4/14.

Made 2 takes of Miss Elizabeth D. Spencer giving short recitation on marriage and song "Mud Pies". Test of photography showed up fine and the speaking part of the recording was good but with Zeugler at the piano - there was interference between piano and voice which showed up both in tests and in records. Ran Vemna made Operas for her with which she was much pleased.

To test out reason for above interference Bob Lett sang - "Just a Song at Twilight" - and at piano - same position as when Miss Spencer sang. No interference. Piano was brought closer. Still no interference. Was played louder. Still no interference. Changed to Church Hymn so that hand full of notes in middle and lower piano registers were used with great force. Still no interference. In other words there was interference

between Miss Spencer's voice and piano even with experienced player & great care and no interference between Carl Petto voice and piano even when efforts were used to secure interference.

Received Dallmeyer 75mm lens from Laboratory & tested. When lens open f 1.9 has brilliant illumination of ground glass and apparently good depth of focus. Tests made with it seem to show good illumination and excellent snappy image but less depth of focus than the Italian lens used.